



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,932	12/08/2005	Masaki Okamura	126722	9579
25944 7590 03/28/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
BRANDT, MICHAEL J				
ART UNIT		PAPER NUMBER		
2837				
MAIL DATE		DELIVERY MODE		
03/28/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/559,932

**Applicant(s)**

OKAMURA ET AL.

**Examiner**

MICHAEL BRANDT

**Art Unit**

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/8/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/ISD)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 20051208

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5650706 (hereinafter Yamada).

Regarding claim 1, Yamada discloses (Figs. 1-3 and 6-8) a motor drive apparatus comprising: estimation means 24 estimating an amount of demagnetization of a permanent magnet motor 18 (col. 2, lines 43-44) based on a voltage control amount of the q axis (see Equations, col. 5, lines 17 and 25) applied in a case where said permanent magnet motor 18 is controlled using a d-q axis transformation; and operation handling means limiting an output of said permanent magnet motor when said estimated amount of demagnetization is larger than a predetermined value (Abstract and also col. 5, lines 11-67 and col. 6, lines 1-26).

Regarding claim 2, Yamada discloses the motor drive apparatus further comprising a converter changing an input voltage necessary for driving said permanent magnet motor, wherein said estimation means corrects said estimated amount of demagnetization according to the level of said input voltage (col. 4, lines 52-54).

Regarding claims 3 and 5, Yamada discloses said estimation means estimating said amount of demagnetization by comparing (based on a difference between) the

voltage control amount of the q axis to be controlled with a reference value (see REFERENCE TORQUE, Fig. 1).

Regarding claims 4 and 6, Yamada discloses wherein said estimation means 24 holds, in the form of a map (MAP), the reference values correlated with at least two revolution numbers to extract said reference value from said map (MAP) and estimate said amount of demagnetization (see Figs. 6 and 8 and also col. 6, lines 63-65).

Regarding claims 7-10, Yamada discloses (see Fig. 3) the motor drive apparatus, wherein said reference value is said voltage control amount of the q axis when no demagnetization of said permanent magnet motor 18 occurs (see also col. 6, lines 5-10).

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL BRANDT whose telephone number is (571)270-1745. The examiner can normally be reached on Monday through Friday 9:00a.m. - 6:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2837

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mb  
/Lincoln Donovan/  
Supervisory Patent Examiner, Art Unit 2837